

WHAT IS CLAIMED IS:

1. A network interface apparatus for connecting a communication terminal to an IP (Internet Protocol) network, comprising:

5 an input circuit for receiving data to be transferred from the communication terminal;

a transmitter for transferring a packet to the IP network;

10 an interface circuit for interfacing said transmitter with the IP network, and for determining a delay in transmission between the IP network and said apparatus to produce delay information;

15 a packetizer circuit for packetizing the data to be transferred into the packet; and

15 a control circuit operative in response to the delay information for controlling said packetizer circuit to adjust a size of the packet on a basis of the delay information.

2. An apparatus in accordance with claim 1, wherein said control circuit comprises a memory circuit for storing therein packet size data representative of packet sizes, and for developing packet size data associated with the delay information, said packetizer circuit adjusting the size of the packet in response to the packet size data developed from said memory circuit.

3. An apparatus in accordance with claim 1, further comprising:

a receiver for receiving a packet transmitted over the IP network; and

5 an output circuit for depacketizing the packet into data and outputting the data to the communication terminal.

4. A network interface apparatus for connecting a communication terminal to an IP (Internet Protocol) network,

comprising:

- an input circuit for receiving data to be transferred  
5 from the communication terminal;
- a transmitter for transferring the data to the IP network;
- an interface circuit for interfacing said transmitter  
with the IP network, and for determining a delay in transmission  
between the IP network and said apparatus to produce delay  
10 information; and
- 15 a control circuit interconnected between said input circuit  
and said transmitter and operative in response to the delay  
information for controlling said transmitter to adjust a  
transfer rate of transferring the data on a basis of the delay  
information.

5. An apparatus in accordance with claim 4, further comprising:

- a receiver for receiving data transmitted over the IP  
network; and
- 5 an output circuit for outputting the transmitted data  
to the communication terminal;
- said control circuit being further interconnected between  
said receiver and said output circuit and controlling said  
output circuit to adjust a transfer rate of outputting the  
10 transmitted data on a basis of the delay information.

6. An apparatus in accordance with claim 4, further comprising a packetizer circuit for packetizing the data to be transferred into a packet,

- said transmitter transferring the data in a form of packet,  
5 said control circuit being operative in response to  
the delay information to control said transmitter to adjust  
a transfer rate of transferring the packet.

7. An apparatus in accordance with claim 6, further

comprising:

a receiver for receiving a packet transmitted over the IP network; and

an output circuit for depacketizing the packet into data and outputting the data to the communication terminal;

said control circuit controlling said output circuit to adjust a transfer rate of outputting the data on the basis of the delay information.

8. A network interface apparatus for connecting a communication terminal to an IP (Internet Protocol) network, comprising:

an input circuit for receiving data to be transferred from the communication terminal;

a transmitter for transferring a packet to the IP network;

an interface circuit for interfacing said transmitter with the IP network;

a packetizer circuit for packetizing the data to be transferred into a packet to develop the packet;

a packet coupler for coupling two or more of the packets with each other; and

said packet coupler inhibiting said packetizer circuit from developing the packet when said packet coupler includes more packets than a first predetermined amount.

9. An apparatus in accordance with claim 8, further comprising a control circuit for controlling said packet coupler to couple more packets when said packetizer circuit includes more data to be packetized.

10. An apparatus in accordance with claim 8, wherein said interface circuit determines a delay in transmission between the IP network and said apparatus to produce delay

information;

5        said apparatus further comprising a control circuit operative in response to the delay information for controlling said packetizer circuit to adjust a size of the packet on a basis of the delay information.

11. An apparatus in accordance with claim 8, wherein said packet coupler comprises:

      a memory circuit for storing the coupled packets therein; and

5        a memory control circuit operative in response to said packetizing circuit and said memory circuit for controlling writing and reading of said memory circuit on a basis of whether or not said packetizer circuit includes more data to be packetized than the first  
10      predetermined amount and of whether or not said memory circuit includes more packets than a second predetermined amount.

12. An apparatus in accordance with claim 10, further comprising:

      a receiver for receiving a packet transmitted over the IP network; and

5        an output circuit for depacketizing the packet into data and outputting the data to the communication terminal; and

      said control circuit controlling said output circuit to adjust a transfer rate of outputting the data on the basis of the delay information.  
10

13. A communication apparatus for transferring data to an IP (Internet Protocol) network, comprising:

      an input circuit for capturing an image of a document and forming data to be transferred representing the image;

5           a transmitter for transferring a packet to the IP  
network;

5           an interface circuit for interfacing said transmitter  
with the IP network, and for determining a delay in  
transmission between the IP network and said apparatus  
10          to produce delay information;

11          a packetizer circuit for packetizing the data to be  
transferred into the packet; and

12          a control circuit operative in response to the delay  
information for controlling said packetizer circuit to  
15          adjust a size of the packet on a basis of the delay  
information.

14. A communication apparatus for transferring data  
to an IP (Internet Protocol) network, comprising:

15          an input circuit for capturing an image of a document  
and forming data to be transferred representing the image;

5           a transmitter for transferring the data to the IP  
network;

10          an interface circuit for interfacing said transmitter  
with the IP network, and for determining a delay in  
transmission between the IP network and said apparatus  
to produce delay information; and

15          a control circuit interconnected between said input  
circuit and said transmitter and operative in response  
to the delay information for controlling said transmitter  
to adjust a transfer rate of transferring the data on a  
basis of the delay information.

15. A communication apparatus for transferring data  
to an IP (Internet Protocol) network, comprising:

15          an input circuit for capturing an image of a document  
and forming data to be transferred representing the image;

5           a transmitter for transferring a packet to the IP

network;  
an interface circuit for interfacing said transmitter  
with the IP network;  
a packetizer circuit for packetizing the data to be  
transferred into a packet to develop the packet;  
a packet coupler for coupling two or more of the  
packets with each other; and  
said packet coupler inhibiting said packetizer circuit  
from developing the packet when said packet coupler includes  
more packets than a first predetermined amount.

16. A method of interfacing a communication terminal  
with an IP (Internet Protocol) network, comprising the  
steps of:

receiving data to be transferred from the communication  
terminal;  
determining a delay in transmission over the IP  
network;  
packetizing the data to be transferred into a packet;  
adjusting a size of the packet on a basis of the delay  
determined; and  
transferring the packet having the size adjusted to  
the IP network.

17. A method of interfacing a communication terminal  
with an IP (Internet Protocol) network, comprising the  
steps of:

receiving data to be transferred from a communication  
terminal;  
determining a delay in transmission over the IP  
network;  
adjusting a transfer rate of transferring the data  
on a basis of the delay determined; and  
transferring the data to the IP network.

18. A method of interfacing a communication terminal with an IP (Internet Protocol) network, comprising the steps of:

5 receiving data to be transferred from the communication terminal;

packetizing the data to be transferred into a packet by a packetizer circuit;

coupling two or more of the packets with each other by a packet coupler;

10 transferring the packet to the IP network; and

inhibiting the packetizer circuit from developing the packet when the packet coupler includes more packets than a predetermined amount.

19. A storage medium for storing therein a procedure of interfacing a communication terminal with an IP (Internet Protocol) network, comprising the steps of:

5 receiving data to be transferred from the communication terminal;

determining a delay in transmission over the IP network;

packetizing the data to be transferred into a packet;

10 adjusting a size of the packet on a basis of the delay determined; and

transferring the packet having the size adjusted to the IP network.

20. A storage medium for storing therein a procedure of interfacing a communication terminal with an IP (Internet Protocol) network, comprising the steps of:

5 receiving data to be transferred from a communication terminal;

determining a delay in transmission over the IP

network;

adjusting a transfer rate of transferring the data  
on a basis of the delay determined; and

10       transferring the data to the IP network.

21. A storage medium for storing therein a procedure  
of interfacing a communication terminal with an IP  
(Internet Protocol) network, comprising the steps of:

5       receiving data to be transferred from the  
communication terminal;

packetizing the data to be transferred into a packet  
by a packetizer circuit;

coupling two or more of the packets with each other  
by a packet coupler;

10       transferring the packet to the IP network; and

inhibiting the packetizer circuit from developing  
the packet when the packet coupler includes more packets  
than a predetermined amount.